High Desert Corridor
Joint Powers Authority

October 11, 2017

Meeting Materials

Item 6

Presentation from LA Metro on Toll Study Report

July 27, 2017

High Desert Multipurpose Corridor Level 2 Traffic and Revenue Study

Task Order PS22786-3049

Presented by
Isidro Panuco

PROJECT STATUS UPDATE

Los Angeles County Metropolitan Transportation Authority

Metro

CDM Smith

High Desert Corridor Project Background

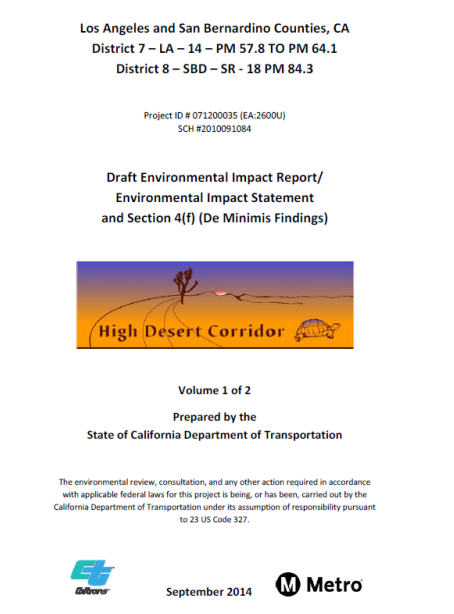
Caltrans and Metro initiated the HDC Environmental Impact Statement/Report (EIS/EIR)

2010 → **2016** → **2017**

Final Environmental Impact Statement/Report (Final EIS/EIR) released

Toll Feasibility Study (Sketch Level) completed by Parsons as part of DEIR

Metro Initiates Level 2 Toll Feasibility Study to evaluate highway portion of project



Los Angeles and San Bernardino Counties, CA
District 7 – LA – 14 – PM 57.8 TO PM 64.1
District 8 – SBD – SR - 18 PM 84.3

Project ID # 071200035 (EA:2600U)
SCH #2010091084

Draft Environmental Impact Report/
Environmental Impact Statement
and Section 4(f) (De Minimis Findings)

High Desert Corridor

Volume 1 of 2

Prepared by the
State of California Department of Transportation

The environmental review, consultation, and any other action required in accordance with applicable federal laws for this project is being, or has been, carried out by the California Department of Transportation under its assumption of responsibility pursuant to 23 US Code 327.

Caltrans September 2014 Metro

<u>Preferred Alternative</u> consisted of the following elements:

- Freeway/Tollway – toll section between 100th st. east Palmdale and US 395
- High Speed Rail from Palmdale Transportation Ctr. to XpressWest station in Victorville
- Bikeway between US 395 in San Bernardino and 20th St. East Palmdale
- Green energy production and/or transmission corridor

Metro CDM Smith

Project Understanding/Study Objectives

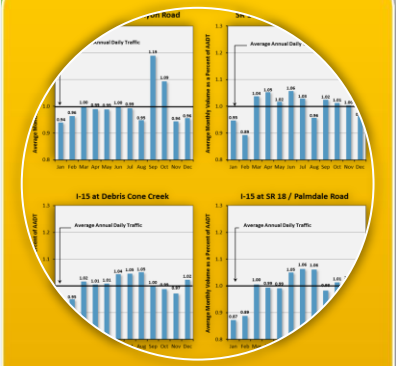
Objective: Develop Level II Traffic and Revenue forecasts for the High Desert Multipurpose Corridor . Prepare objective and independent traffic and revenue estimates.

- Project extends from SR 14 in Los Angeles County to SR 18 in San Bernardino County
- Build out of four lane control access freeway with intermediate interchange/access
- Project is All Electronic Toll project between 100th Street East and US 395 (with sensitivity for full corridor)
- Daily Traffic ranges from 20,000 and 44,000 vehicles within project area
- Consideration of High Speed Rail (HSR) corridor service between Palmdale and Victorville

Scope of a Level II Traffic and Revenue Study

1. **Overall corridor travel demand**
2. **Future growth characteristics**
3. **Market capture and demand share**
4. **Users willingness-to-pay**

Major Project Study Tasks



Existing Data Complication Summary

- Existing Studies
- Historical Data
- Seasonality

Data Collection and Fieldwork

- Current Traffic
- Congestion Trends
- Peaking/Trucks
- O/D data
- Stated Preference

Socioeconomic Analysis

- 2016 SCAG RTP
- Local Interviews
- Independent Source Comparison
- Economic Diversity
- Induced Growth

Traffic Modeling

- Current Networks
- Major Generators
- Future Traffic
- Regional Demand

Traffic and Revenue

- Toll Configuration
- Values of Time
- Toll Diversion
- Rate Sensitivities
- Regional Demand

Metro CDM Smith

Existing Data Compilation Summary

Relevant Studies

- High Desert Multipurpose Corridor Studies
  - Final EIR/EIS
  - Sketch Level Tolling Forecast Methodology
- Other Relevant Studies
  - North County Multimodal Integrated Transportation Study (NCMITS) - April 2016
  - Comprehensive Regional Goods Movement Plan and Implementation Strategy - April 2016
  - Northwest 138
  - Measure R Projects in Lancaster and Palmdale
  - Rail Ridership Report

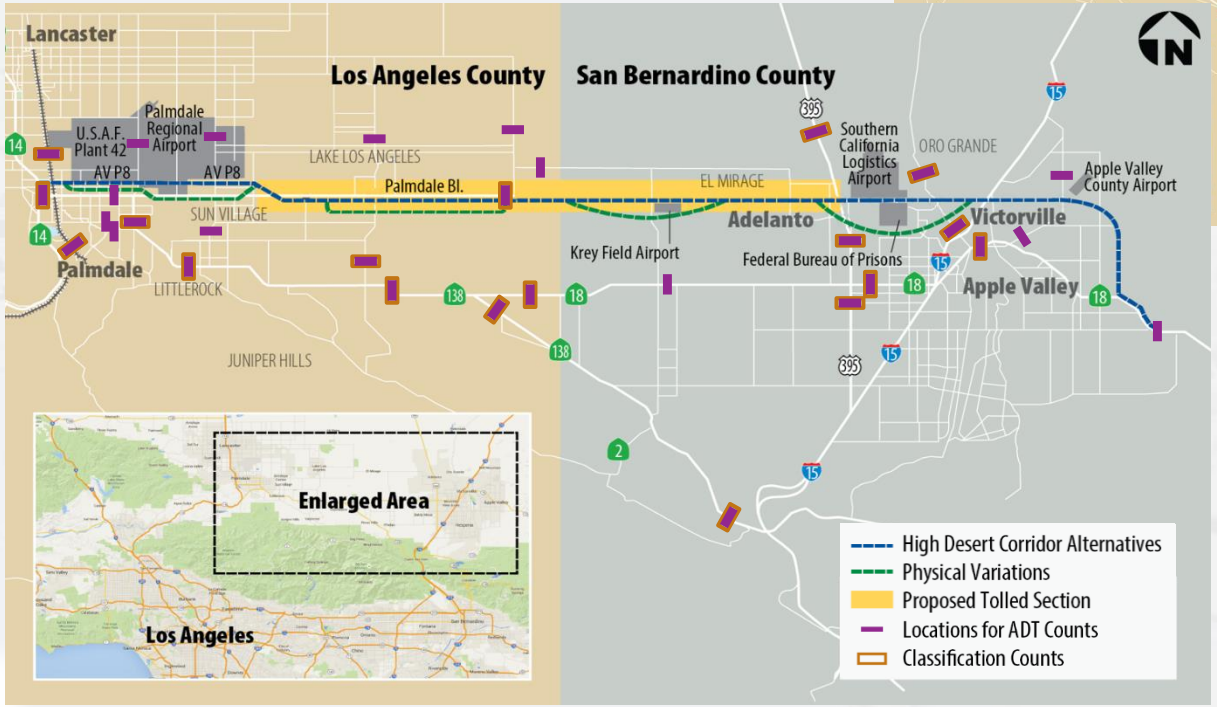
Data Collection/Fieldwork

Field Reconnaissance – June 2016

Traffic Counts

- Conducted from September 11th -18th
  - 13 intersections, 31 arterials, 2 freeways

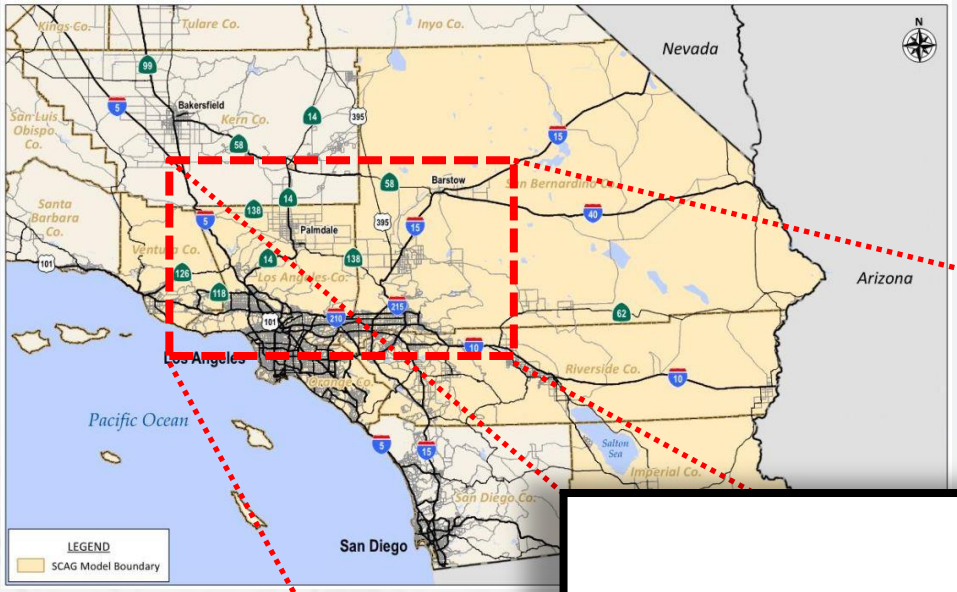
FIELD INTERSECTION TURNING MOVEMENT LOCATIONS



FIELD ARTERIAL COUNT (ADT) LOCATIONS

SCAG RTP 2016 Model Boundary

Windowed Approach

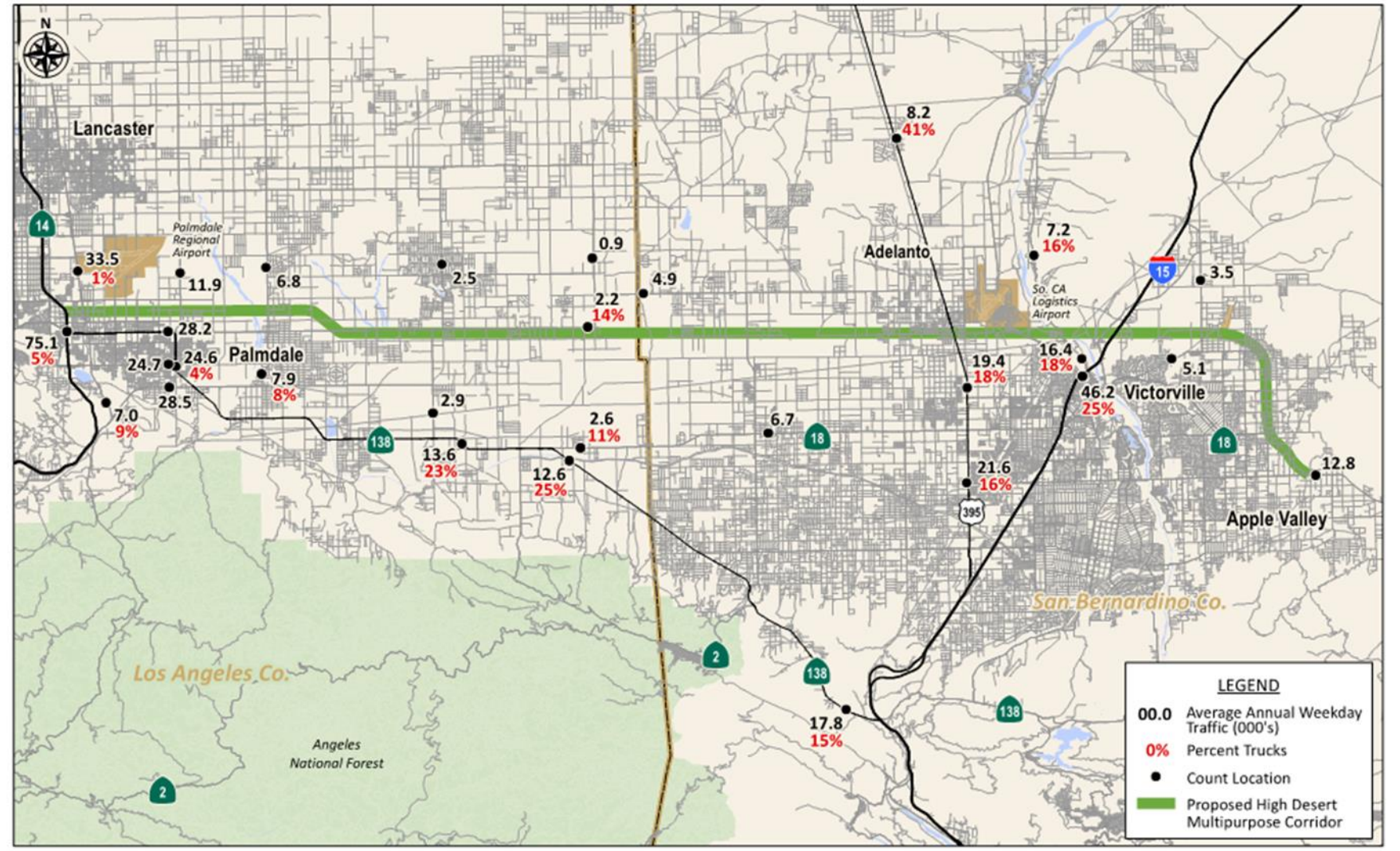


- Model Study boundaries include entire High Desert area and Parallel facilities such as I-210, I-10 and SR-60

Metro CDM Smith

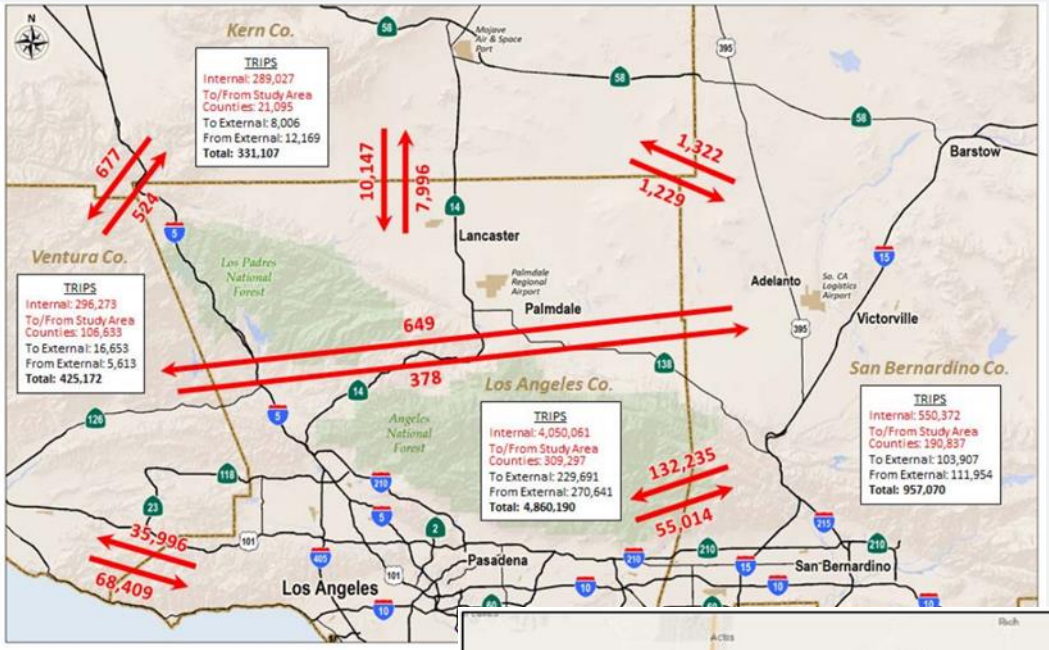
Composition of Traffic

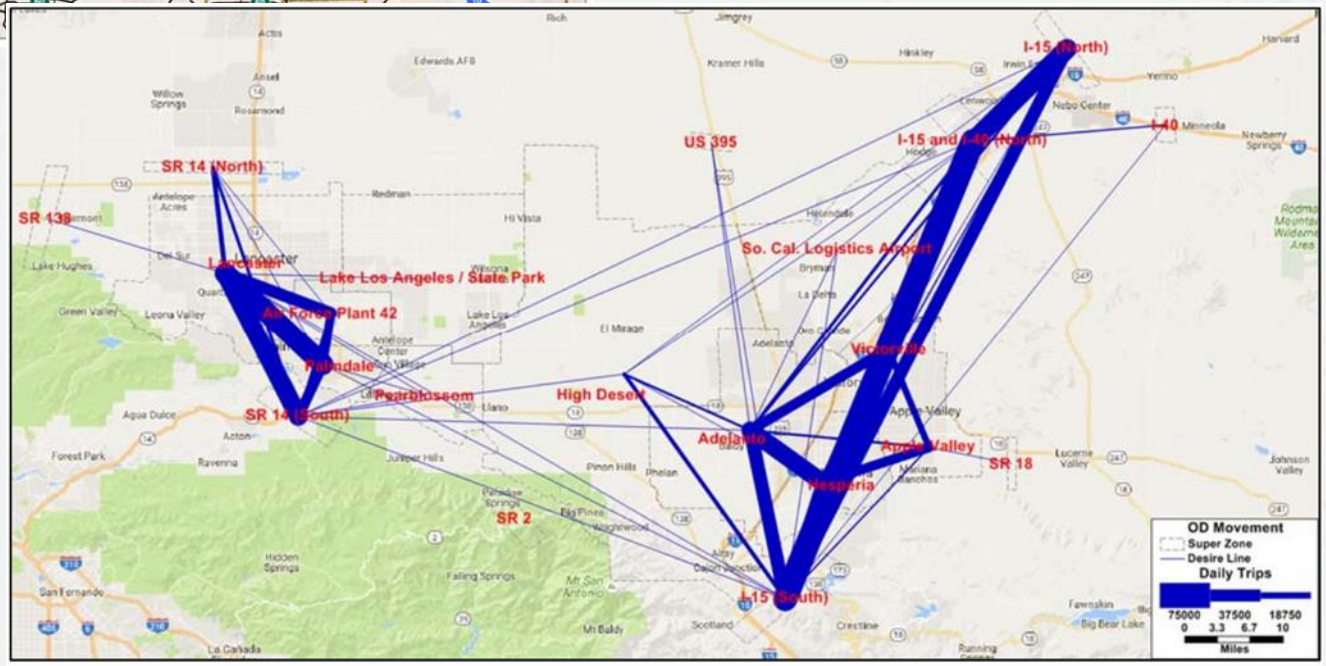
Daily Traffic Volumes



Distribution of Traffic

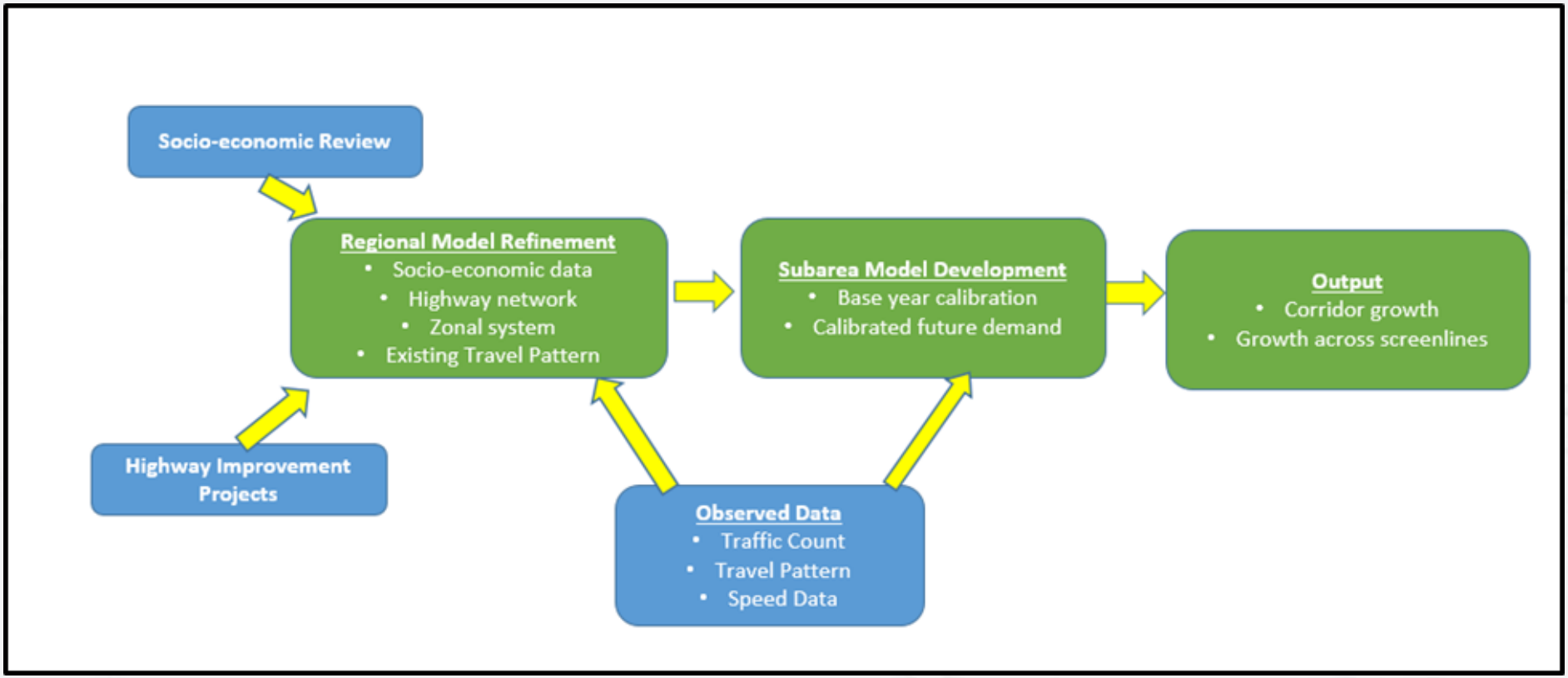
Origin/Destination Summary





Basic Modeling Methodology

- Updated SCAG 2016 Model
  - Infuse updated traffic and congestion trends
  - Current Socio-economic trends and forecasts update
  - Network enhancements and updates

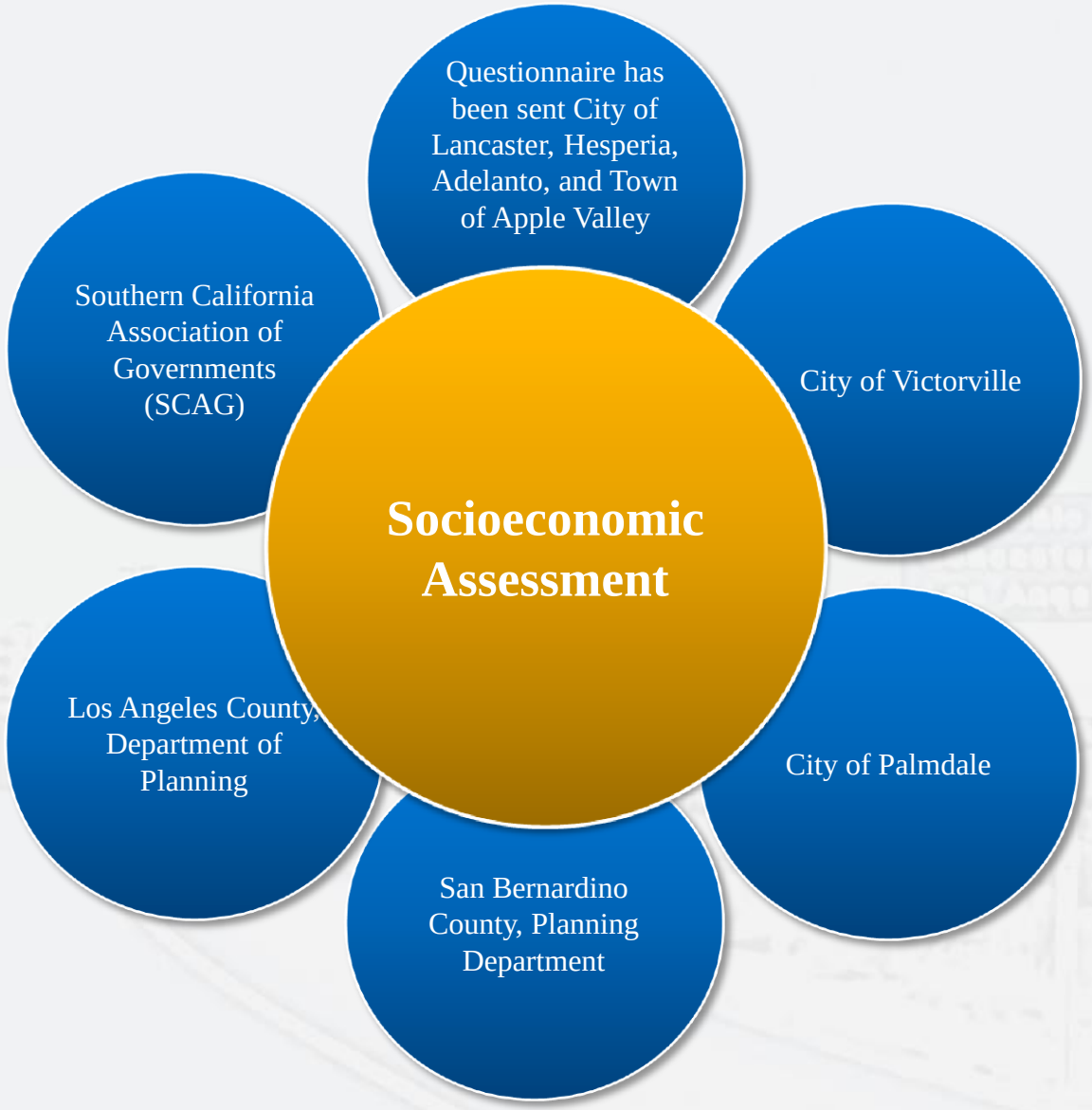


Socioeconomic Assessment

Stakeholder Interviews

Purpose

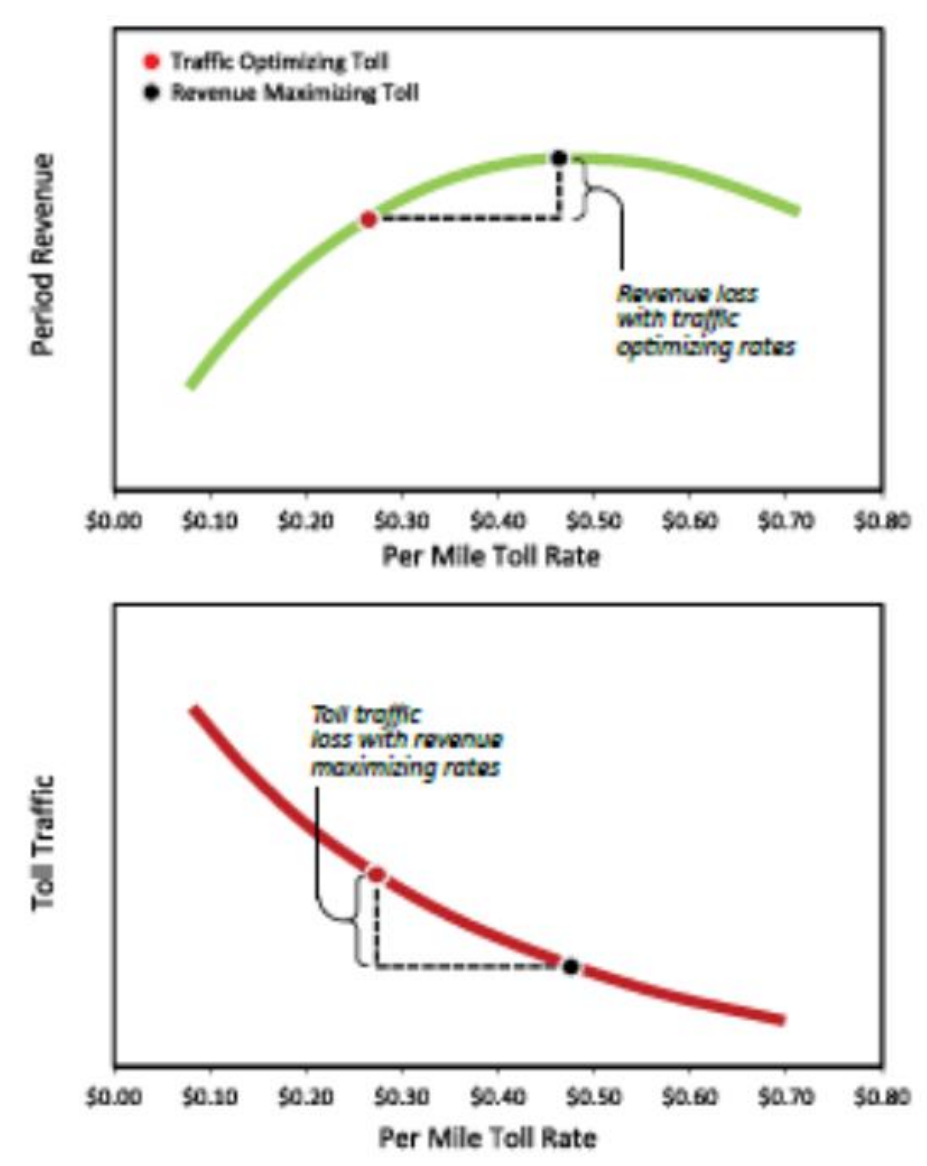
- Evaluate the reasonableness of the SCAG 2016 RTP projections
- Consider the land-use and growth effects of HDMC Project
- Include updated known and announced developments and projects



Traffic and Revenue Modeling Methodology

Key Considerations

- 2016-2040 SCAG RTP
- Windowed Model
- Calibration
  - Traffic/Speed/Delay
  - Origin-Destination Patterns
  - Traffic Operations
- Mode Choice Variations
- Toll Diversion
- Toll Rate Sensitivity

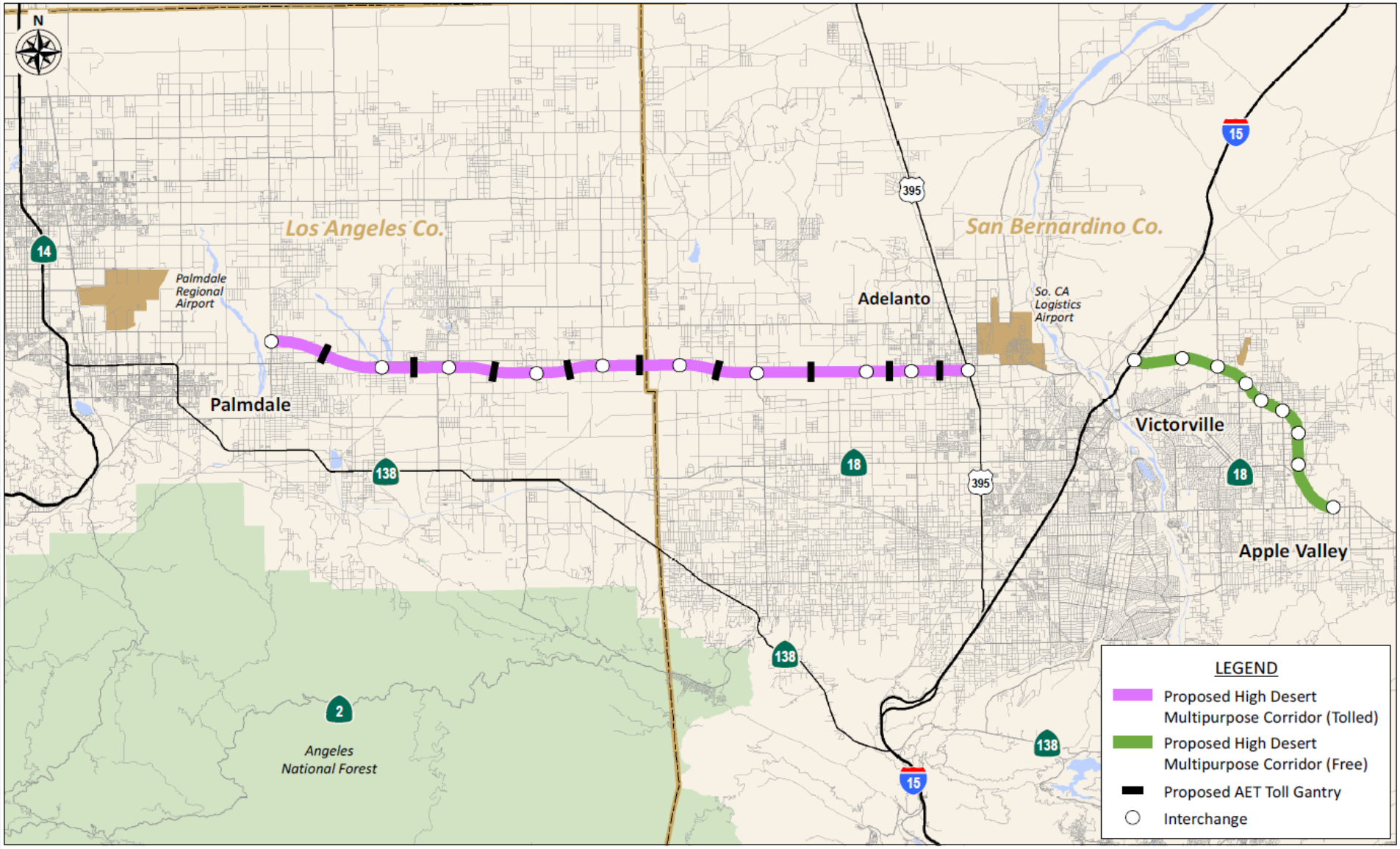


Note: The charts illustrated above are only for visual representation

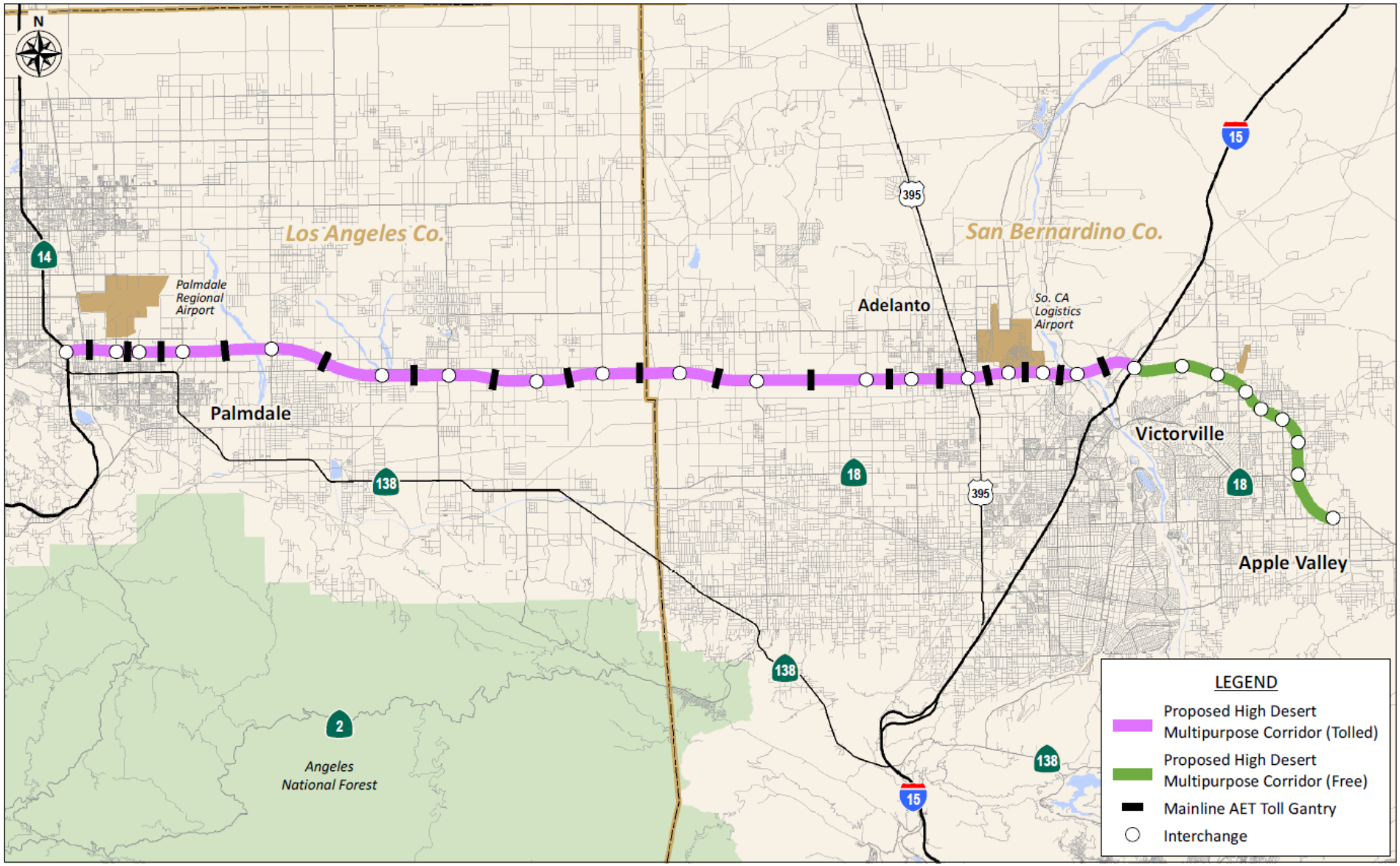
Project Tolling Concepts

- Base Case "Short Configuration"
  - Proposed 32 mile east-west limited access HDMC toll segment
  - Limits 90th St. east in Palmdale to US 395
- Long Configuration
  - Proposed 49 mile SR-14 to I-15 east-west limited
- Open Toll Scenario
  - Proposed 49 mile SR-14 to I-15 east-west limited
  - Divided the corridor into four toll segments priced per mile

Project Tolling Concepts – Short Configuration



Project Tolling Concepts – Long Configuration

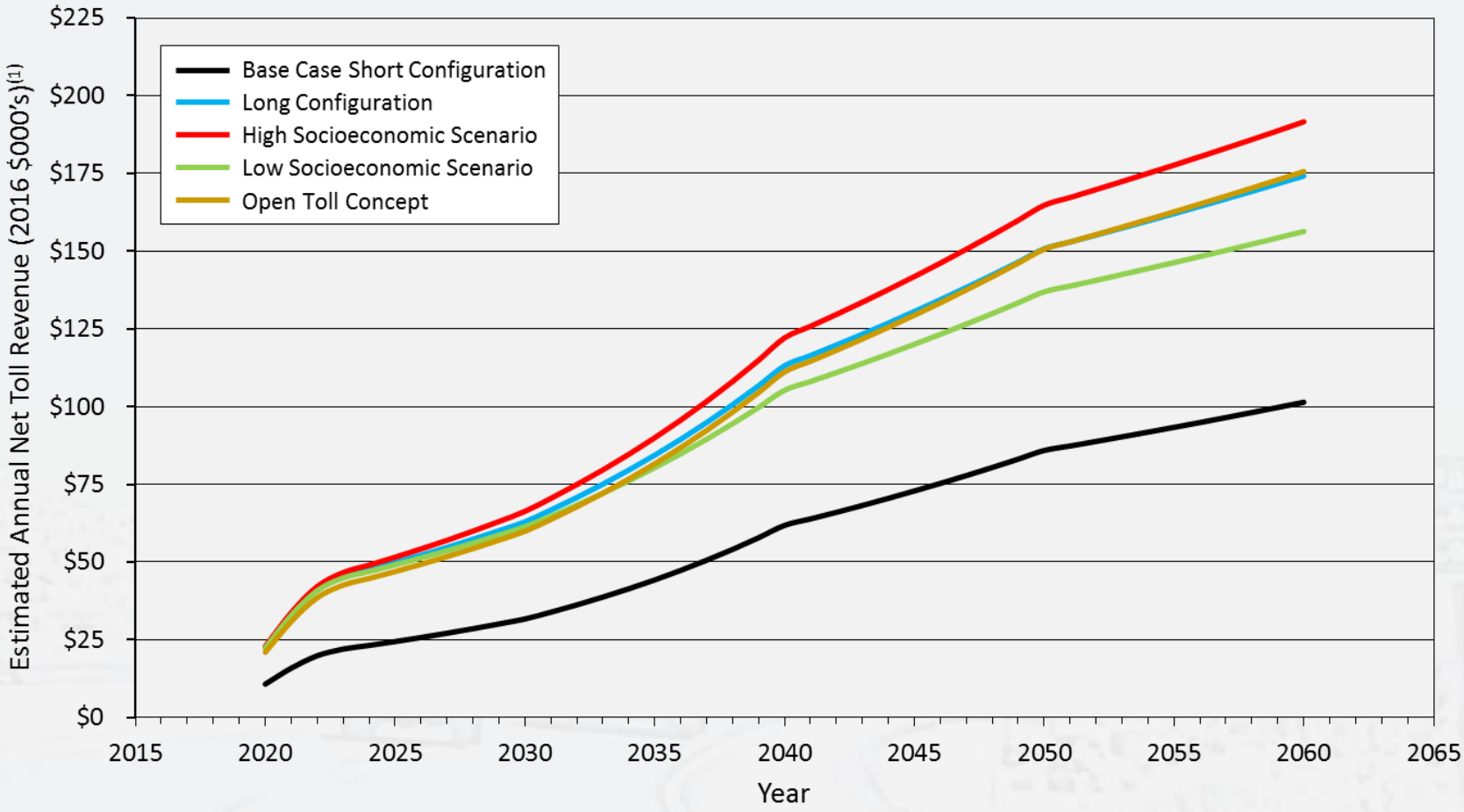


Metro CDM Smith

Project Tolling Concepts – Open Toll Scenario

Metro CDM Smith

Estimated Annual Net Toll Revenue 2020 to 2060



(1) Includes revenue adjustments for uncollectible and unpaid transactions

Note: Assumed ramp-up factors were 0.6 in 2020, 0.8 in 2021, and 0.95 in 2022 with full ramp-up by 2023.

An additional revenue reduction of 5 percent was assumed in 2020 to account for additional opening year leakage.

Net toll revenue is in 2016 dollars.

Metro CDM Smith

Estimated Annual Net Toll Revenue 2020 to 2060

- Base Case "Short Configuration"

2020	2040	2060	(millions $)
10.7	61.8	101.4	

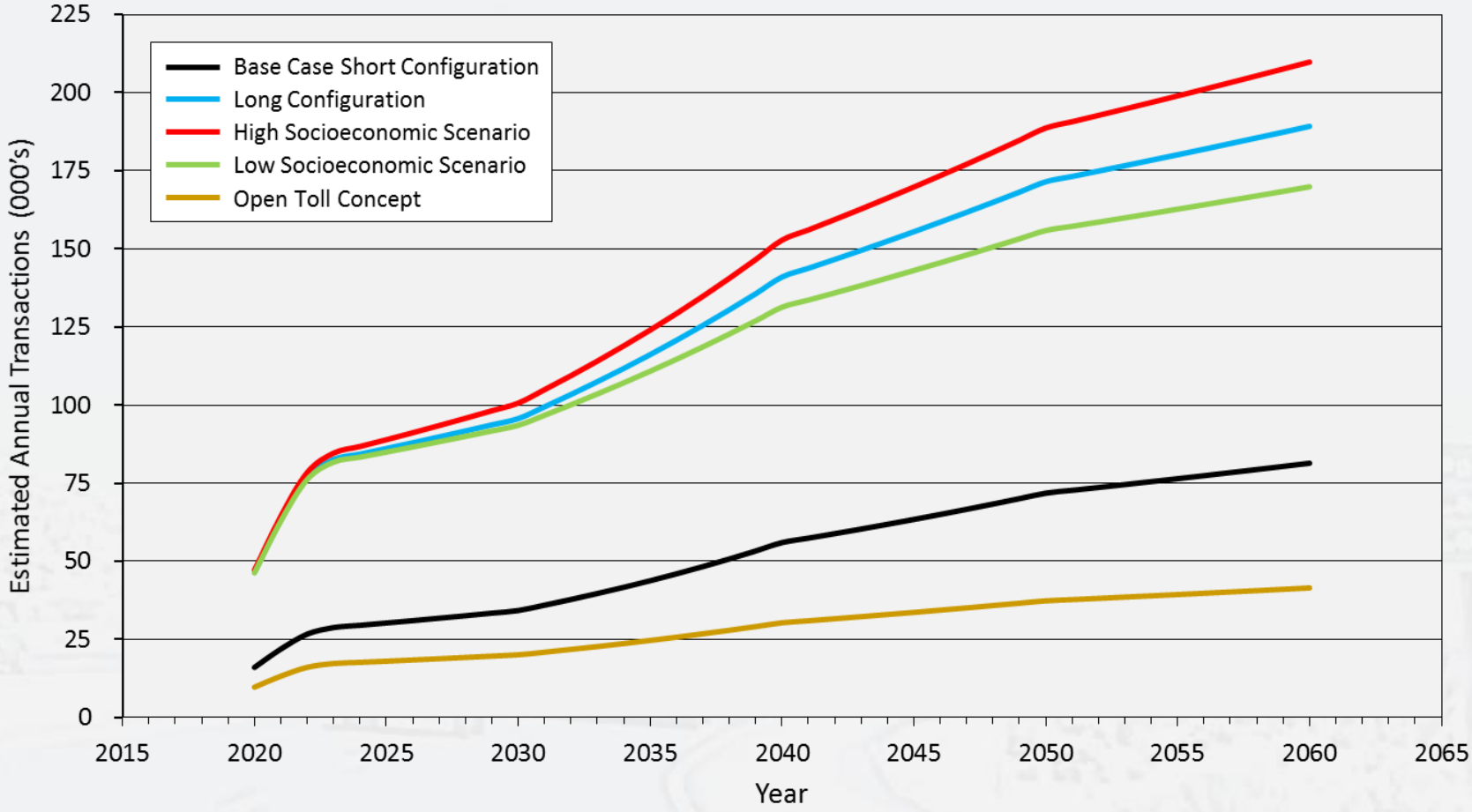
- Long Configuration

2020	2040	2060	(millions $)
22.5	113.1	174.1	

- Open Toll Scenario

2020	2040	2060	(millions $)
20.9	111.1	175.6	

Estimated Annual Transactions 2020 to 2060



Note: Assumed ramp-up factors were 0.6 in 2020, 0.8 in 2021, and 0.95 in 2022 with full ramp-up by 2023.

Estimated Annual Transactions 2020 to 2060

- Base Case "Short Configuration"

2020	2040	2060	(millions)
16.1	55.9	81.4	

- Long Configuration

2020	2040	2060	(millions)
46.5	141.0	189.2	

- Open Toll Scenario

2020	2040	2060	(millions)
9.7	30.3	41.5	

Metro CDM Smith

Metro

CDM Smith®

cdmsmith.com